

distant from the end by about $\frac{1}{12}$ part of its length. Near the end of the coil, the directions of force converge to a point as exactly as possible at the centre of the end of the coil.

The author then describes the graphic process by which he has resolved the entire magnetic forces into constituent parts in the directions longitudinal and transversal to the magnet at every station, and gives tabular statements of the magnitudes of those constituent parts. A comparison is made with the results of an assumed law, but no satisfactory agreement is obtained.

An Appendix is subjoined, containing an investigation by James Stuart, Esq., of the theoretical attraction of a galvanic coil upon a small mass of magnetism, and a tabular comparison of the numerical values obtained from this investigation with the numerical values found by experiment. The agreement is satisfactory.

IV. "On a mode of Measuring the Internal Resistance of a Multiple Battery by adjusting the Galvanometer to Zero." By M. JULES RAYNAUD. Communicated by Prof. STOKES, Sec. R.S. Received January 11, 1872.

The author points out that the method given by Mr. Henry Mance for this purpose, and described in vol. xix. of the 'Proceedings of the Royal Society' (p. 252), is identical with that which he had himself previously given, and which is described in the 'Comptes Rendus' for July 22, 1867; at least the only difference is that M. Raynaud prescribes putting the poles in connexion with the earth, which of course is not necessary.

February 15, 1872.

GEORGE BIDDELL AIRY, C.B., President, succeeded by Mr. C. B. VIGNOLES (as Deputy appointed by the PRESIDENT), in the Chair.

The President, on the part of the Council, submitted to the Meeting the following Address of congratulation to be presented to the Queen:—

"We, YOUR MAJESTY'S most dutiful and loyal subjects, the President, Council, and Fellows of the Royal Society of London for improving Natural Knowledge, desire humbly to offer to YOUR MAJESTY our sincere congratulations on the restoration to health of HIS ROYAL HIGHNESS THE PRINCE OF WALES.

"Having shared in the deep anxiety of YOUR MAJESTY and the Nation whilst HIS ROYAL HIGHNESS lay prostrate under his dangerous